

FJB Systems is a company that specialises in meat processing. Its management has been involved with all aspects of meat management and engineering over the last 20 years in many countries around the world. In particular, its experience has been associated with building meat processing plants designed for export to the USA and the EU. Our Expertise, therefore, is second to none in advising clients as to the way such export plants should be designed and the type of equipment that should be used together with the management systems which should be put into operation to achieve international standards.

by F.J. Bowater MA (Cantab) C.Eng., M.I.Nuc.E., M.I.Mar.E., M.Inst R.

Over the last two decades India has built up a significant export industry associated with boning buffalo meat, packing and freezing it and then exporting it to such countries as the Middle East and South East Asia. These countries have a requirement for such products, particularly to service the ex-patriate Indian communities in these areas.

If the Indian processing plants could be built to higher standards than exist at the moment and to standards which meet EU and USDA requirements, then the exporters from India would be in a position to penetrate new markets around the world and would be able to receive considerably higher prices for the products which they produce.

The purpose of this paper is to make operators and those wishing to enter the industry aware of FJB Systems and how we can help them in renovating their industry. This paper briefly shows the quality of workmanship and design that is possible, using photographs of plants that have been put together using specialists from FJB Systems in other countries, which also export to the USA and EU Countries. It also aims to provide statistics concerning current world livestock prices and resources.

India has the opportunity to eventually dominate the world markets in buffalo meat for manufacturing. Diagram 1 shows the numbers of large stock that exist in the top countries of the world. It will be noted that India has a stock approaching 300 million animals, which is over 25% of the total world population. The next largest livestock area is the USSR with only some 120 million animals. Australia, for example, which is

renown for its export of meat products, has a large animal population of around 24 million. This, however, is only some 8% of India's total. It can be therefore seen that India has an enormous raw material resource which has not been properly exploited, to date.

The present operations in India are primitive. Buffalo which are no longer required for farm use are killed in municipal abattoirs which are run

with inadequate equipment and buildings and operate with poor management. These abattoirs do not in any way approach international standards of construction and hygiene, and private operators buy carcasses from the abattoirs and take them to their separate boning facilities.

The facilities of the private operators are generally better than those provided by the municipal authorities for killing the

animals, but are nevertheless far below international standards, lacking stainless steel equipment, hygienically designed buildings and proper wash-down and sterilising facilities. The result of these poor standards means that the

exported Indian buffalo meat can only be sold to certain communities and countries.

Other countries such as Australia, New Zealand and those in South America sell into the US and European markets. The result of all this is that the Indian export market is restricted with respect to quantity, but also the product receives approximately half the price of the products produced by these other countries. Diagram 2 indicates the difference in stock

prices between the main areas of the world and the differences in meat selling price between the Developed World and the Third World.



Buffalo Boning in India

Australia, for example, which is renown for its export of meat products, has a large animal population of around 24 million. This, however, is only some 8% of India's total.

Approx. World Large Stock Numbers (1989)

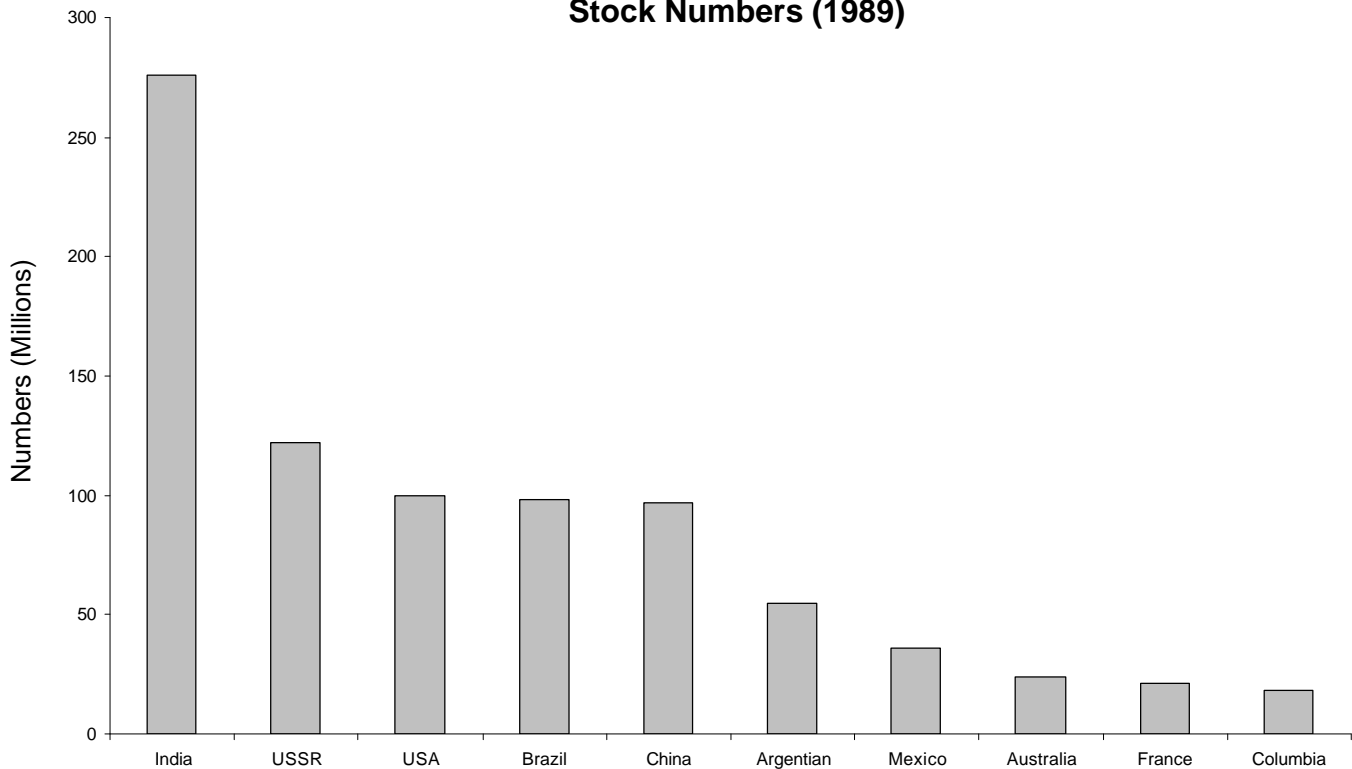


Diagram 1

It is imperative, therefore, that Indian entrepreneurs reconstruct their facilities to meet the correct international standards so that the volume of exports can be increased and the revenues obtained from them further increased because of the better selling prices obtainable.

Because the private operator buys his buffalo carcasses from the municipal abattoirs, it is essential that the carcasses so received are immediately washed down at the load-in dock of the buffalo boning plant. Following this operation, the carcass must be immediately taken into refrigerated rooms and chilled rapidly to a temperature not exceeding 7°C.

The municipal abattoirs in India do not have refrigeration facilities and in order to produce a good product, it is very important to reduce the meat temperature as fast as possible, following killing and dressing in the abattoir and prior to processing.

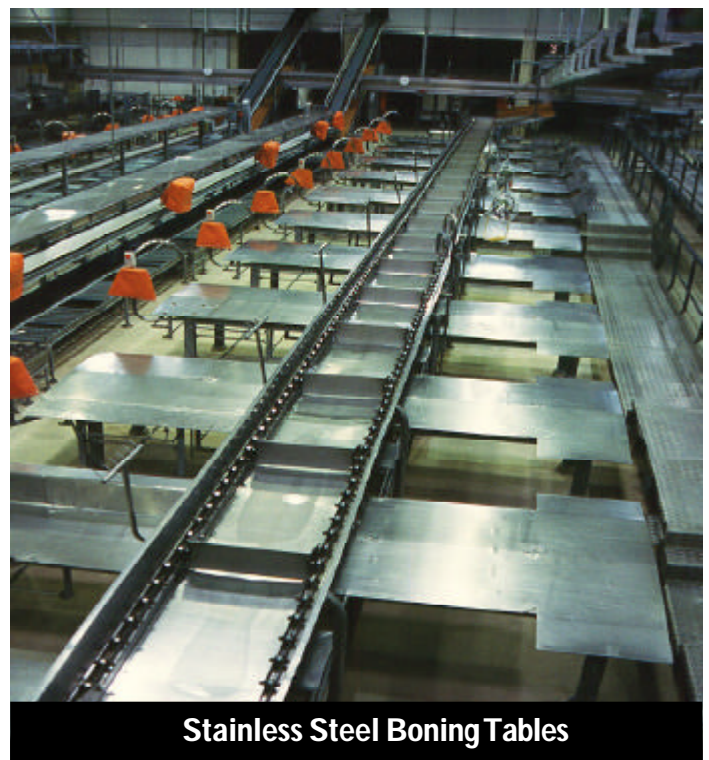
In order to meet international standards, the surface finishes of the chillers and the processing rooms within the boning complex must be of the highest quality, of white colour, smooth and impervious material, and constructed so as to be easily cleaned. The floors of the chillers and boning rooms must be sloped to drain at every 40m². Provision must be made for wash-down facilities with hot and cold water, together with sterilising water at a temperature in excess of 82°C.

In order to achieve these high quality surface finishes, it is preferable to use specially coated insulation panels which provide the hygienic surfaces, whilst at the same time ensuring that the operations are suitably insulated

to prevent heat loss.

After boning the carcasses, the meat must be hygienically and scientifically packaged and then frozen rapidly in modern freezing tunnels. After freezing it is essential that modern, efficiently operated coldstore facilities are used prior to dispatch of the product to the docks for export.

It is hoped that this short paper conveys the potential of the buffalo industry in India and also demonstrates that



Stainless Steel Boning Tables

Buffalo Boning in India

Approx. Large Stock Prices (1989)

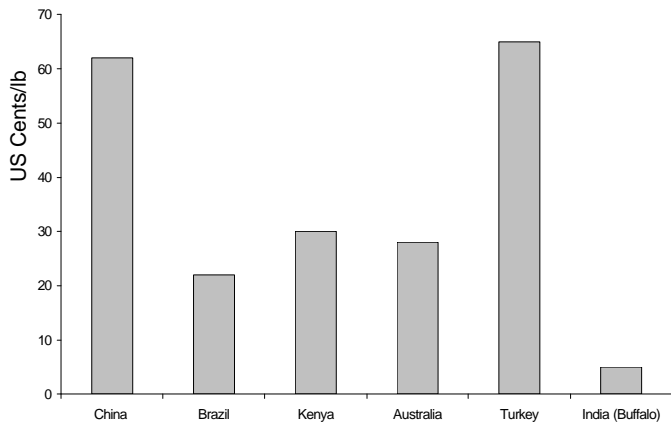


Diagram 2a

Approx. Manufacturing Meat Prices (1989)

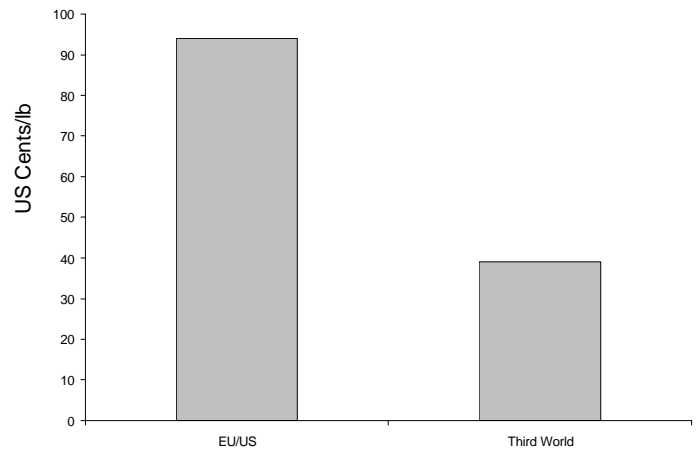


Diagram 2b

if the industry is suitably modernised by making use of specialists who have been in this type of industry for many years, then the use of such modern practices will significantly increase Indian exports, improve the Indian balance of payments position and eventually convey back to the Indian farmer higher prices for stock which in turn will raise the standard of living of the Indian farmer and the Indian population generally.

